

## NUCLEOTIDE AND DEDUCED AMINO ACID SEQUENCES

## MOP1:

## Sequence I.D. No. 1

1 cactgaggcag cactctcttc gtcgcttcgg ccagtgtgtc gggtctgggccc ctgacaagcc  
 61 acctgaggag aggtctcggag ccggggcccg accccggcga ttgccgcccg cttctctcta  
 121 gtctcacgag gggtttcccg cctcgcaccc ccacctctgg acttgccctt cttctcttc  
 181 tccgcgtgtg gagggagcca gcgcttaggc cggagcgcgc ctggggggccg cccgccgtga  
 241 agacatcgcg gggaccgatt caccatggag ggcgccggcg gcgcgaacga caagaaaaag  
 301 ataagtctctg aacgtcgaaa agaaaagtct cgagatgcag ccagatctcg gcgaagttaa  
 361 gaatctgaag ttttttatga gcttgctcat cagttgccac tccacataa tgtgagttcg  
 421 catcttgata aggcctctgt gatgaggctt accatcagct atttgctgtg gaggaactt  
 481 ctggatgctg gtgatttgga tattgaagat gacatgaaag cacagatgaa ttgcttttat  
 541 ttgaaagcct tggatgggtt tgttatgggt ctcacagatg atggtgacat gatttacatt  
 601 tctgataatg tgaacaaata catgggatta actcagtttg aactaactgg acacagtgtg  
 661 tttgatttta ctcacccatg tgaccatgag gaaatgagag aaatgcttac acacagaaat  
 721 ggcccttgta aaaagggtaa agaacaaaac acacagcgaa gcttttttct cagaatgaag  
 781 tgtaccctaa ctagccgagg aagaactatg aacataaagt ctgcaacatg gaaggatttg  
 841 cactgcacag gccacattca cgtatatgat accaacagta accaacctca gtgtgggtat  
 901 aagaaaccac ctatgacctg cttggtgctg atttgtgaac ccattcctca cccatcaaat  
 961 attgaaattc ctttagatag caagactttc ctcagtcgac acagcctgga tatgaaattt  
 1021 tcttattgtg atgaaagaat taccgaattg atgggatatg agccagaaga acttttaggc  
 1081 cgctcaattt atgaatatta tcatgctttg gactctgac atctgaccaa aactcatcat  
 1141 gatatgttta cttaaaggaca agtcaccaca ggacagtaca ggatgcttgc caaaagaggt  
 1201 ggatatgtct gggttgaaac tcaagcaact gtcatatata acaccaagaa ttctcaacca  
 1261 cagtgcattg tatgtgtgaa ttacgttgtg agtgggatta ttcagcacga cttgattttc  
 1321 tcccttcaac aaacagaatg tgccttataa ccggttgaat cttcagatat gaaaatgact  
 1381 cagctattca ccaaagttga atcagaagat acaagtagcc tctttgacaa acttaagaag  
 1441 gaacctgatg ctttaacttt gctggcccca gccgctggag acacaatcat atctttagat  
 1501 tttggcagca acgacacaga aactgatgac cagcaacttg aggaagtacc attatataat  
 1561 gatgtaatgc tccctcacc caacgaaaaa ttacagaata taaatttggc aatgtctcca  
 1621 ttaccacccg ctgaaacgcc aaagccactt cgaagtgtg ctgaccttgc atcaatcaa  
 1681 gaagttgcat taaaattaga accaaatcca gagtcactgg aactttcttt taccatgcc  
 1741 cagattcagg atcagacacc tagtccttcc gatggaagca ctagacaaag ttcacctgag  
 1801 cctaatagtc ccagtgaata ttgtttttat gtggatagt atatggtcaa tgaattcaag  
 1861 ttggaattgg tagaaaaact ttttgctgaa gacacagaag caaagaaccc attttctact  
 1921 caggacacag atttagactt ggagatgtta gtcctctata tcccaatgga tgatgacttc  
 1981 cagttacgtt ccttcgatca gttgtcacca ttagaaagca gttccgcaag ccctgaaagc  
 2041 gcaagtccct aaagcacagt tacagtattc cagcagactc aaatacaaga acctactgct  
 2101 aatgccacca ctaccactgc caccactgat gaattaaaaa cagtgcacaa agaccgtatg  
 2161 gaagacatta aaatattgat tgcacttcca tctcctaccc acatacataa agaaactact  
 2221 agtgccacat catcaccata tagagatact caaagtcgga cagcctcacc aaacagagca  
 2281 ggaaaaggag tcatagaaca gacagaaaaa tctcatccaa gaagcctcaa cgtgttatct  
 2341 gtcgctttga gtcaaaagac tacagttcct gaggaagaac taaatcccaa gatactagct  
 2401 ttgcagaatg ctcagagaaa gcgaaaaaat gaacatgatg gttcactttt tcaagcagta  
 2461 ggaattggaa cattattaca gcagccagac gatcatgcag ctactacatc actttcttgg  
 2521 aaacgtgtaa aaggatgcaa atctagttaa cagaatggaa tggagcaaaa gacaattatt  
 2581 ttaataccct ctgatttagc atgtagactg ctggggcaat caatggatga aagtggatta  
 2641 ccacagctga ccagttatga ttgtgaagtt aatgctccta tacaaggcag cagaaacctt  
 2701 ctgcagggtg aagaattact cagagctttg gatcaagtta actgagcttt ttcttaattt  
 2761 cattcctttt tttggacact ggtggctcac tacctaaagc agtctattta tattttctac  
 2821 atctaatttt agaagcctgg ctacaatact gcacaaactt ggtagtttca atttttgatc  
 2881 ccctttctac ttaatttaca ttaatgctct tttttagtat gttctttaat gctggatcac  
 2941 agacagctca ttttctcagt tttttggtat ttaaaccatt gcattgcagt agcatcattt  
 3001 taaaaaatgc acctttttat ttattttatt ttggctaggg agtttatccc tttttcgaat

1 2 3 4 5 6 7 8 9 10 11 12 13 14 15 16 17 18 19 20 21 22 23 24 25 26 27 28 29 30 31 32 33 34 35 36 37 38 39 40 41 42 43 44 45 46 47 48 49 50 51 52 53 54 55 56 57 58 59 60 61 62 63 64 65 66 67 68 69 70 71 72 73 74 75 76 77 78 79 80 81 82 83 84 85 86 87 88 89 90 91 92 93 94 95 96 97 98 99 100 101 102 103 104 105 106 107 108 109 110 111 112 113 114 115 116 117 118 119 120 121 122 123 124 125 126 127 128 129 130 131 132 133 134 135 136 137 138 139 140 141 142 143 144 145 146 147 148 149 150 151 152 153 154 155 156 157 158 159 160 161 162 163 164 165 166 167 168 169 170 171 172 173 174 175 176 177 178 179 180 181 182 183 184 185 186 187 188 189 190 191 192 193 194 195 196 197 198 199 200 201 202 203 204 205 206 207 208 209 210 211 212 213 214 215 216 217 218 219 220 221 222 223 224 225 226 227 228 229 230 231 232 233 234 235 236 237 238 239 240 241 242 243 244 245 246 247 248 249 250 251 252 253 254 255 256 257 258 259 260 261 262 263 264 265 266 267 268 269 270 271 272 273 274 275 276 277 278 279 280 281 282 283 284 285 286 287 288 289 290 291 292 293 294 295 296 297 298 299 300

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3061 tattttttaag aagatgccaa tataatTTTT gtaagaaggc agtaaccttt catcatgatc
3121 ataggcagtt gaaaaatTTT tacacctTTT ttttcacatt ttacataaat aataatgctt
3181 tgccagcagt acgtggtagc cacaattgca caatatatTT tcttaaaaaa taccagcagt
3241 tactcatgga atatatcttg cgtttataaa actagtTTTT aagaagaaat tttttttggc
3301 ctatgaaatt gttaaacctg gaacatgaca ttgttaatca tataataatg attcttaaat
3361 gctgtatggt ttattatttta aatgggtaaa gccatttaca taatatagaa agatatgcat
3421 atatctagaa ggtatgtggc atttatTTTg ataaaattct caattcagag aaatcatctg
3481 atgtttctat agtcactTTg ccagctcaaa agaaaaacaat accctatgta gttgtggaag
3541 tttatgctaa tattgtgtaa ctgatattaa acctaaatgt tctgcctacc ctggtggtat
3601 aaagatattt tgagcagact gtaaacaaaga aaaaaaaaat catgcattct tagcaaaatt
3661 gcctagtagt ttaatttgct caaaatacaa tgtttgattt tatgcacttt gtcgctatta
3721 acatcctTTT tttcatgtag atttcaataa ttgagtaatt ttagaagcat tatttttagga
3781 atatatagtt gtcacagtaa atatcttTgt ttttctatgt acattgtaca aatttttcat
3841 tccttttgct ctttTgtggt ggatctaaca ctaactgtat tgttttgtta catcaataaa
3901 acatccttctg tggaaaaaaa aaaaaaaaaa aaa

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## Sequence I.D. No. 10

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MEGAGGANDKKKISSERRKEKSRDAARSRRSKESEVFYELAHQL
PLPHNVSSHLDKASVMRLTISYLRVRKLLDAGDLDIEDDMKAQMNC FYLKALDGFVMV
LTDDGDMIIYISDNVNKYMGLTQFELTGHVSFDFTHPCDHEEMREMLTHRNLVKKKGKE
QNTQRSFFLRMKCTLTSRGRTMNIKSATWKVLHCTGHIHVYDTNSNQPCGYKKPMT
CLVLICEPIPHPSNIEIPLDSKTFLSRHS LDMKFSYCDERITELMGYEPEELLGRSIY
EYYHALDSHDLTKTHDMFTKGQVTTGQYRMLAKRGYVWVETQATVIYNTKNSQPQC
IVCVNYVVSGIIQHDLIFSLQQTECVLKPVESSDMKMTQLFTKVESED TSSLFDKLLK
EPDALTLAPAAGDTIISLDFGSNDTETDDQQL EEVPLYNDVMLPSPNEKLQINLAM
SPLPTAETPKPLRSSADPALNQEVALKLEPNPESLELSFTMPQIQDQTPSPSDGSTRQ
SSPEPNPSEYCFYVDSDMVNEFKLELVEKLFAEDTEAKNPFSTQD TDLDLEMLAPYI
PMDDDFQLRSFDQLSPLESSSASPESASPQSTVTVFQQTQIQEPTANATTTTATTDDEL
KTVTKDRMEDIKILIASPSPTHIHKETTSATSSPYRDTQSRTASPNRAGKGVIEQTEK
SHPRSPNVLSVALSQRTTVPEEELNPKILALQNAQRKRKMEHDGSLFQAVGIGTLLQQ
PDDHAATTSLSWKRVKGCKSSEQNGMEQKTIILIPSDLACRLLGQSMDESGLPQLTSY
DCEVNAPIQGSRNLLQGEELLRALDQVN

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## MOP2:

## Sequence I.D. No. 2

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1 gcgtctgaac gtctcaaagg gccacagcga caatgacagc tgacaaggag aagaaaagga
61 gtagctcgga gaggaggaag gagaagtccc gggatgctgc gcggtgccgg cggagcaagg
121 agacggaggt gttctatgag ctggcccatg agctgcctct gccccacagt gtgagctccc
181 atctggacaa ggcctccatc atgcgactgg caatcagctt cctgcgaaca cacaagctcc
241 tctcctcagt ttgctctgaa aacgagtcgg aagccgaagc tgaccagcag atggacaact
301 tgtacctgaa agccttgagg ggtttcattg ccgtggtgac ccaagatggc gacatgatct
361 ttctgtcaga aaacatcagc aagttcatgg gacttacaca ggtggagcta acaggacata
421 gtatctttga cttcactcat ccttgcgacc atgaggagat tcgtgagaac ctgagtctca
481 aaaatggctc tggttttggg aaaaaaagca aagacatgtc cacagagcgg gacttcttca
541 tgaggatgaa gtgcacggtc accaacagag gccgtactgt caacctcaag tcagccacct
601 ggaaggctct gcactgcacg ggccagggtg aagtctacaa caactgccct cctcacataa
661 gtctgtgtgg ctacaaggag cccctgctgt cctgcctcat catcatgtgt gaaccaatcc
721 agcacccatc ccacatggac atccccctgg atagcaagac cttcctgagc cgccacagca
781 tggacatgaa gttcacctac tgtgatgaca gaatcacaga actgattggt taccaccctg
841 aggagctgct tggccgctca gcctatgaat tctaccatgc gctagactcc gagaacatga
901 ccaagagtca ccagaacttg tgcaccaagg gtcaggtagt aagtggccag taccggatgc
961 tcgcaaagca tgggggctac gtgtggctgg agaccagggg gacggctatc tacaaccctc
1021 gcaacctgca gccccagtgc atcatgtgtg tcaactacgt cctgagtgag attgagaaga
1081 atgacgtggt gttctccatg gaccagactg aatccctgtt caagccccac ctgatggcca
1141 tgaacagcat ctttgatagc agtggcaagg gggctgtgtc tgagaagagt aacttcctat

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1201 tcaccaagct aaaggaggag cccgaggagc tggcccagct ggctcccacc ccaggagacg  
 1261 ccatcatctc tctggatttc gggaaatcaga acttcgagga gtcctcagcc tatggcaagg  
 1321 ccatcctgcc cccgagccag ccatgggcca cggagttgag gagccacagc acccagagcg  
 1381 aggctgggag cctgcctgcc ttcaccgtgc cccaggcagc tgccccgggc agcaccaccc  
 1441 ccagtgccac cagcagcagc agcagctgct ccacgcccac tagccctgaa gactattaca  
 1501 catctttgga taacgacctg aagattgaag tgattgagaa gctcttcgcc atggacacag  
 1561 aggccaaagga ccaatgcagt acccagacgg atttcaatga gctggacttg gagacactgg  
 1621 caccctatat ccccatggac ggggaaggct tccagctaag ccccatctgc cccgaggagc  
 1681 ggctcttggc ggagaaccca cagtccaccc cccagcactg cttcagtgcc atgacaaaca  
 1741 tcttccagcc actggccccct gtagccccgc acagtcctct cctcctggac aagtttcagc  
 1801 agcagctgga gagcaagaag acagagcccg agcgccggcc catgtcctcc atcttctttg  
 1861 atgcccggaa caaagcatcc ctgccaccgt gctgtggcca ggccagcacc cctctctctt  
 1921 ccatgggggg cagatccaac acccagtggc cccagatcc accattacat tttggggcca  
 1981 caaagtgggc cgtcggggat cagcgcacag agttcttggg agcagcgccg ttggggcccc  
 2041 ctgtctctcc accccatgtc tccaccttca aaacaaggct tgcaaagggt tttggggctc  
 2101 gagggccaaa cgtgctgagt ccggccatgg tagccctctc caacaagctg aagctgaagc  
 2161 gacagctgga gtatgaaaag caagccttcc aggacccgag cggggggggac ccacctggtg  
 2221 gcagcacctc acatttgatg tggaaacgga tgaagaacct caggggtggg agctgccctt  
 2281 tgatgccgga caagccactg agcgcaaatg tacccaatga taagctcacc caaaactcca  
 2341 tgaggggccc gggccatccc ctgagacatc tgccgctgcc acagcctcca tctgccatca  
 2401 gtcccgggga gaacagcaag agcaggttcc cccacagtgc ctacgccacc cagtaccagg  
 2461 actacagcct gtcgtcagcc cacaaggtgt caggcatggc aagccggctg ctcgggcccc  
 2521 catttgagtc ctacctgctc ccgcaactga ccagatatga ccgtgaggtg aaagtgcctg  
 2581 tcttgaggaa ctccacgctc ctgcaaggag gggacctcct cagagccctg gaccaggcca  
 2641 cctgagccag gcttctacct gggcagcacc tctgccgacg ccgtcccacc agcttcactc  
 2701 tctccgtctg tctttgcaac taggtatttg

## Sequence I.D. No. 11

MTADKEKKRSSERRKEKSRDAARCRRSKETEVFYELAHPLP  
 HSVSSHLDKASIMRLAISFLRTHKLLSSVCSENESEAEADQMDNLYLKALEGFIAVV  
 TQDGDMI FLSENISKFMGLTQVELTGHSIFDFTHPCDHEEIRENLSLKNGSGFGKKS  
 QMSTERDFFMRMKTCTVTNRGRTVNLKSATWKVLHCTGQVKVYNNCPPHNSLCGYKEPL  
 LSLCLIMCEPIQHPSHMDIPLDSKTFLSRHSMDMKFTYCDDRITELIGYHPEELLGRS  
 AYEYFHALDSENMTKSHQNLCTKGQVVSQYRMLAKHGGYVWLETQGTVIYNPRNLQP  
 QCIMCVNYVLSEIEKNDVVFSMDQTESLFPKPHLMAMNSIFDSSGKGAVSEKSNFLFTK  
 LKEEPEELAQLAPTPGDAIISLDFGNQNFEESSAYGKAILPPSQPWATELRSHSTQSE  
 AGSLPAFTVPQAAAPGSTTPSATSSSSSCSTPNSPEDYYTSLDNDLKIEVIEKLFAMD  
 TEAKDQCSTQTDNFELDLETLAPYIPMDGEGFQLSPICPEERLLAENPQSTPQHCFSA  
 MTNIFQPLAPVAPHSPFLLDKFQQQLESKKTPERRPMSSIFFDAGSKASLPPCCGQA  
 STPLSSMGGRSNTQWPPDPPLHFGPTKWAVGDQRTEFLGAAPLGPPVSPPHVSTFKTR  
 SAKGFGARGPNVLSAMVALSNKLLKLRQLEYEKQAFQDPSGGDPPGGSTSHLMWKRM  
 KNLRGGSCPLMPDKPLSANVPNDKLTQNSMRGLGHPLRHLPLPQPPSAISPGENSKSR  
 FPPQCYATQYQDYSLSAHKVS GMASRLGPSFESYLLPELTRYDREVKVPVLGSSTL  
 LQGGDLLRALDQAT

## MOP3:

## Sequence I.D. No. 3

1 ggagatgagc aaggaggccg tgagcctgtg ggcgctcact gtgtccctcc aacccccagt  
 61 ccccttgtgt gtctgcagag agatgacagg atcaggcaga agaaaacagc aatgtgtaac  
 121 tttgccatcc atctccagag aattatgttt ttatcttttg ctttttcctc cccccagggt  
 181 agaataataca gaacaccaag gagggataaa aaatgcaagg gaagctcaca gtcagattga  
 241 aaagcggcgt cgggataaaa tgaacagttt tatagatgaa ttggcttctt tggtagcaac

301 atgcaacgca atgtccagga aattagataa acttactgtg ctaaggatgg ctgttcagca  
 361 catgaaaaca ttaagaggtg ccaccaatcc atacacagaa gcaaactaca aaccaacttt  
 421 tctatcagac gatgaattga aacacctcat tctcagggca gcagatggat ttttgtttgt  
 481 cgtaggatgt gaccgagggga agatactctt tgtctcagag tctgtcttca agatcctcaa  
 541 ctacagccag aatgatctga ttgggtcagag tttgtttgac tacctgcac ctaaagatat  
 601 tgccaaagtc aaggagcagc tctcctcctc tgacaccgca ccccggggagc ggctcataga  
 661 tgcaaaaact ggacttccag ttaaaacaga tataaccctt gggccatctc gattatgttc  
 721 tggagcacga cgttctttct tctgtaggat gaagtgtaac aggccttcag taaaggttga  
 781 agacaaggac ttccctctta cctgctcaaa gaaaaaagca gatcgaaaaa gcttctgcac  
 841 aatccacagc acaggctatt tgaaaagctg gccaccacca aagatggggc tggatgaaga  
 901 caacgaacca gacaatgagg ggtgtaacct cagctgcctc gtcgcaattg gtcgactgca  
 961 ttctcatgta gttccacaac cagtgaacgg ggaaatcagg gtgaaatcta tggaaatatgt  
 1021 ttctcggcac gcgatagatg gaaagtttgt tttttagac cagagggcaa cagctatatt  
 1081 ggcataattta ccacaagaac ttctaggcac atcgtgttat gaatatattt accaagatga  
 1141 cataggacat cttgcagaat gtcataaggca agttttacag acgagagaaa aaattacaac  
 1201 taattgctat aaatttaaaa tcaaagatgg ttcttttatc acactacgga gtcgatgggt  
 1261 cagtttcatg aacccttgga ccaagggaagt agaatatatt gtctcaacta acactgttgt  
 1321 ttttagccaac gtcctggaag gcgggggacc aaccttccca cagctcacag catcccccca  
 1381 cagcatggac agcatgctgc cctctggaga aggtggccca aagaggacc accccactgt  
 1441 tccagggtt ccagggggaa cccgggctgg ggcaggaaaa ataggccgaa tgattgctga  
 1501 ggaaatcatg gaaatccaca ggataagagg gtcattgcgt tctagctgtg gctccagccc  
 1561 attgaacatc acgagtacgc ctccccctga tgcctcttct ccaggaggca agaagatttt  
 1621 aaatggaggg actccagaca ttccctccag tggcctacta tcaggccagg ctcaggagaa  
 1681 cccagggttat ccatattctg atagttcttc tattcttggt gagaaccccc acatagggtat  
 1741 agacatgatt gacaacgacc aaggatcaag tagtcccagt aatgatgagg cagcaatggc  
 1801 tgtcatcatg agcctcttgg aagcagatgc tggactgggt ggccctgttg acttttagtga  
 1861 cttgccatgg ccgctgtaaa cantacatgt tgctttggca acagcctata gtatcaaagt  
 1921 gcattactgg tggagtttta cagtctgtga agcttactgg ataaggagag aatagctttt  
 1981 atgtactgac ttcataaaaag ccatctcaga gccattgata caagtcaatc ttactatatg  
 2041 taacttcaga caaagtggaa ctaagcctgc tccagtgttt cctcatcatt gattattggg  
 2101 ctagctgtgg atagcttgca ttaattgtat attttggatt ctggttgtgt tgaatttttt  
 2161 aatcatgtg cacagaagca tcattggtag cttttatatg caaatgggtca tttcagatgt  
 2221 atgggtgttt tacactacaa agaagctccc catgtggata tttcttatac taattgtatc  
 2281 ataaagccgt ttattcttcc ttgtaagaat cctttactat aaatatgggt taaagtataa  
 2341 tgtactagac agttaaatat ttttaataaa tgtttccctt gttctataaa aaaaaaaaaa  
 2401 aaaaaaaaaa aanattcgtg cggccgctag

Sequence I.D. No. 12

MSKEAVSLWALTVSLQPPVPLCVCREMTGSGRRKQQCVTLPFIS  
 RELCFYLLLFPPPRLEYTEHQGGIKNAREAHSQIEKRRRDKMNSFIDELASLVPTCNA  
 MSRKLDKLTVLRAVQHMKTLRGATNPYTEANYKPTFLSDDELKHLILRAADGFLFVV  
 GCDRGKILFVSESVFKILNYSQNDLIGQSLFDYLHPKDIKVKEQLSSSDTAPRERLI  
 DAKTGLPVKTDITPGPSRLCSGARRSFFCRMKCNRPVSKVEDKDFPSTCSKKKADRKS  
 FCTIHSTGYLKSWPPTKMGLDEDNEPDNEGCNLSCLVAIGRLHSHVVPQPVNGEIRVK  
 SMEYVSRHAIDGKFVFDQRATAILAYLPQELLGTSCYEYFHQDDIGHLAECHRQVLQ  
 TREKITTNCYKFKIKDGSFITLSRWFSFMNPWTKEVEYIVSTNTVVLANVLEGGDPT  
 FPQLTASPHSMDSMLPSGEGGPKRTHPTVPGIPGGTRAGAGKIGRMIAEEIMEIHRIR  
 GSLRSSCGSSPLNITSTPPPDASSPGGKKILNGGTPDIPSSGLLSGQAQENPGYPYSD  
 SSSILGENPHIGIDMIDNDQGSSSPSNDEAAMAVIMSLLEADAGLGGPVDFSDLPWPL

MOP4:

Sequence I.D. No. 4

1 gaattccggg ccggaaaaac tgcataaaaa atttaaatgga tgaagatgag aaagacagag  
 61 ccaagagagc ttctcgaaac aagtctgaga agaagcgtcg ggaccagttc aatgttctca  
 121 tcaaagagct cagttccatg ctccctggca acacgcggaa aatggacaaa accaccgtgt  
 181 tggaagaggt catcggattt ttgcagaaac acaatgaagt ctacgcgcaa acggaaatct  
 241 gtgacattca gcaagactgg aagccttcac tcctcagtaa tgaagaattc acccagctga  
 301 tgttggaggc attagatggc ttcattatcg cagtgcacaac agacggcagc atcatctatg  
 361 tctctgacag tatcacgcct ctccctgggc atttaccgtc ggatgtcatg gatcagaatt  
 421 tgttaaattt cctcccagaa caagaacatt cagaagttaa taaaatcctt tcttcccata  
 481 tgcttgtagc ggattccccc tcccagaat acttaaaatc tgacggcgat ttagagtttt  
 541 attgccatct tctcagaggc agcttgaacc caaaggaatt tccaacttat gaatacataa  
 601 aattttagg aaattttcgc tcttacaaca atgtgcctag cccctcctgt aatggttttg  
 661 acaacacctt ttcaagacct tgccgggtgc cactaggaaa ggaggtttgc ttcattgccca  
 721 ccgttcgtct ggcaacacca caattcttaa aggaaatgtg catagttgac gaacctttag  
 781 aggaattcac ttcaaggcat agcttggaaat ggaaattttt atttctggat cacagagcac  
 841 ctccaatcat aggatacctg ccttttgaag tgctgggaac ctacggctat gactactacc  
 901 acattgatga cctggagctc ctggccagggt gtcaccagca cctgatgcag ttgggcaaag  
 961 ggaagtcgtg ttgctaccgg tttctgacca aaggtcagca gtggatctgg ctgcagactc  
 1021 actactacat cacctaccat cagtggaaact ccaagcccga gttcatctgt tgcacacact  
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 1141 cgccatccga ggccctccac tcctcagcac taaaggacaa gggctcaagc ctggaacctc  
 1201 ggcagcactt taacgcactc gacgtgggtg cctcgggcct taataccagt cattcgccat  
 1261 cggcgtcctc aagaagtcc cacaatcct cgcacacagc catgtcagaa cccacctcca  
 1321 ctcccaccaa gctgatggca gaggccagca ccccggtttt gccaatgca gccacctgc  
 1381 cccaagagtt acctgtcccc gggctcagcc aggcagccac catgccggcc cctctgcctt  
 1441 ccccatcgtc ctgagacctc acacagcagc tcctgcctca gaccgttctg cagagcacgc  
 1501 ccgctcccat ggcacagttt tcggcacagt tcagcatgtt ccagaccatc aaagaccagc  
 1561 tagagcagcg gacgcggatc ctgcaggcca atatccggtg gcaacaggaa gagctccaca  
 1621 agatccagga gcagctctgc ctgggtccagg actccaacgt ccagatgttc ctgcagcagc  
 1681 cagctgtatc cctgagcttc agcagcacc agcgacctga ggctcagcag cagctacagc  
 1741 aaaggtcagc tgcagtgact cagccccagc tcggggcggg cccccaactt ccagggcaga  
 1801 tctcctctgc ccaggtcaca agccagcacc tgctcagaga atcaagtgtg atatcaaccc  
 1861 aggttccaaa gccaatgaga agctcacagc taatgcagag cagcggccgc tc

Sequence I.D. No. 13

MDEDEKDRAKRASRNKSEKKRRDQFNVLIELSSMLPGNTRKMD  
 KTTVLEEVIQFLQKHNEVSAQTEICDIQDQWKPSFSLNNEFTQLMLEALDGFIIAVTT  
 DGSIIYVSDSITPLLGHLPSDVMQDQNLNLFPEQEHSEVYKILSSHMLVTDSPSPEYL  
 KSDGDLEFYCHLLRGLNPKEFPTYEYIKFVGNFRSYNNVPSPPSCNGFDNTLSRPCR  
 PLGKEVCFIATVRLATPQFLKEMCIVDEPLEEFTSRHSLEWKFLFLDHRAPPIIGYLP  
 FEVLGTSGYDYHIDLELLARCHQHLMQFGKGKSCCYRFLTKGQWQIWLQTHYYITY  
 HQWNSKPEFIVCTHSVVSADVRVERRQELALEDPPEALHSSALKDKGSSLEPRQHF  
 NALDVGASGLNTSHSPSASSRSSHKSHTAMSEPTSTPTKLMAEASTPALPRSATLPQ  
 ELPVPGLSQAATMPAPLPSPSSCDLTQQLLPQTVLQSTPAPMAQFSAQFSMFQTIKDQ  
 LEQRTRILQANIRWQQEELHKIQEQLCLVQDSNVQMFLQQPAVSLSFSSTQRPQAQQQ  
 LQQRSAAVTQPQLGAGPQLPGQISSAQVTSQHLRESSVISTQGPKPMRSSQLMQSSG  
 RS

MOP5:

Sequence I.D. No. 5

1 gaattcccgg agaccagcgc tgcggggccgc ggcggctggg gcgaggccag ctggcggccc  
 61 cggtctcag cccccagagc agcacctggg aggtcacatc ttgcagtcct tggatggctt  
 121 tgtgttcgcc ttgaaccagg aaggaaaatt cctctacatc tcagagacag tctccatcta

181 tctgggtctc tcacaggttg agatgacggg cagcagcgtc ttcgactaca ttcaccctgg  
241 ggaccactca gaggtgctgg agcaactggg gctgcggaag ccgacgcccc gcccccaac  
301 cccgccctcc gtctcctctt cctcctcctc ttctctctcg cttgcagata cccccgagat  
361 cgaggccagc ctcaccaagg tgccccctc ctccctgggc caggagcgtt ccttctttgt  
421 ccgcatgaaa tccacgctca ccaagagggg gctgcacgtc aaggcctcag ggtacaaggt  
481 catccacgtg actgggcgcc ttcgggcccc cgccctgggc cttgtggccc tcgggcacac  
541 gttgcccccg gccccctgg ctgagctgcc actccatgga cacatgatcg tcttccgtct  
601 cagcctgggt ctcaccatcc ttgcttgtga gagcagagtc agcgaccaca tggacctggg  
661 gccctcagag ctggtggggc gcagctgcta ccagtttgtc cacggacaag acgccacgag  
721 gatccgccag agccacgtgg acttgctgga caagggtcag gtgatgactg gttactaccg  
781 ttggctgcag cgtgccgggg gcttcgtgtg gctgcagctt gtggccacag tggctgggag  
841 cgggaagagc cccggggagc accatgtgct ttgggtcagc cacgtgctca gccaaagcca  
901 ggggtggccaa actccttttg atgccttcca gcttccagcc agcgtggcct gtgaggaggc  
961 atccagcccc gggccagagc ccacagagcc ggagcctccg acggaaggga agcaggctgc  
1021 cccagcggag aacgaggccc cccagaccca gggcaaacgc atcaaagtgg agcccgcccc  
1081 gagggaaacc aaaggctccg aggacagtgg cgacgaggat ccctccagcc acccggccac  
1141 accgaggccc gagttcacct ctgtcatccg ggcaggggtc ctgaagcagg atccggtgcg  
1201 gccatggggc ctggcgccct cgggggacct cccgcccacc ctctgcacg cgggcttctt  
1261 gccgccggtg gtgcggggcc tgtgcacacc cggcaccatc cgctacggcc ccgaggagct  
1321 gggcctggtg taccgcacc tgacagaggt gggctccggc cccgcgctcc cggaggcctt  
1381 ttaccgccc ctgggcctgc cctaccggg gcccgcgggc accaggctgc cgcggaaggg  
1441 ggactgagga ctggcagagc tgccggcgcc ggacctgcg acaaccggg tccccagga  
1501 cagtaggccc ggctctgccc gtagccctga gaattaaac ccggctctcc ctgcaaaaaa  
1561 aaaaaaaaaa aaatttctg c

## Sequence I.D. No. 14

NSRRPALRAAAAAGARPAGGPGSQPPEQHLGGHILQSLDGFVFAL  
NQEGKFLYISETVSIYLGSLQVEMTGSSVFDYIHPGDHSEVLEQLGLRTPTPGPPTPP  
SVSSSSSSSSSLADTPEIEASLTKVPPSSLVQERSFFVRMKSTLTKRGLHVKASGYKV  
IHVTGRLRAHALGLVALGHTLPPAPLAELPLHGHMIVFRLSLGLTILACESRVSDHMD  
LGPSELVGRSCYQFVHGQDATRIQSHVDLLDKQVMTGYRVLQRAGGFVWLQSVAT  
VAGSGKSPGEHHVLWVSHVLSQAEGGQTPLDAFQLPASVACEEASSPGPEPTEPEPPT  
EGKQAAPAENEAPQTQGKRIKVEPGPRETKGSEDSGDEDPSHPATPRPEFTSVIRAG  
VLKQDPVRPWGLAPPGDPPPTLLHAGFLPPVVRGLCTPGTIRYGPAELGLVYPHLQRL  
GPGPALPEAFYPPLGLPYPGPAGTRLPRKGD

## MOP6:

SEQ ID NO:6 (MOP6 cDNA)

CCACGCGTCCGACGCCCCCACC CGGGAGGGGGAGAGAGGCCAAAAAGTAAGAGAGGAAAAAATAGC  
AGGAAGATGGCGCCACCAAGCCAGCTTTCAGCAGGATCCTTCCAGGCGAGAACGTTTACAAGCATTG  
AGAAAGGAGAAATCCCGAGATGCTGCTCGCTCCCGCCGGGGAAAAAGAAACTTTGAGTTCTATGAATTG  
GCCAAGTTGTTGCCTCTTCTGTCAGCCATTACCAGCCAGCTCGACAAGGCATCCATCATTGACTTACA  
ATTAGCTATCTGAAATGAGGGACTTTGCTAACCAGGGGGACCCTCCGTGGAAGTTGCGAATGGAAGGC  
CCTCCACCTAACACATCAGTAAAAGGTGCACAGCGAAGGAGAAGCCCCAGTGCCTAGCCATTGAAGTA  
TTTGAAGCACATTTGGGAAGCCACATTTTGCAGTCCCTGGATGGCTTTGTATTTGCACTAAATCAGGAA  
GGAAAATTTTTGTACATTTCCGAAACAGTCTCCATCTACCTAGGCCTCTCACAAGTGGAGCTGACAGGC

AGCAGTGTCTTTGACTATGTCCACCCCGGAGATCACGTGGAGATGGCTGAGCAGCTGGGCATGAAGCTC  
CCCCCTGGGCGGGGTCTCCTGTCACAGGGCACTGCTGAGGACGGAGCCAGCTCAGCATCTTCTCCTCT  
CAGTCGGAGACCCCCGAGCCAGTGGAGTCAACCAGCCCCAGTCTGCTAACCCTGACAACACTCTTGAG  
CGTTCCTTTTTTCATCCGAATGAAATCTACTCTGACCAAACGCGGTGTGCACATCAAATCATCAGGATAT  
AAGGTGATTACATAACAGGCCGGCTACGCCTGAGAGTGTGCTGTCCCACGGGAGGACCGTCCCCAGC  
CAAATCATGGGTCTCGTGGTTGTTGCGCATGCCTTGCTCCCCCTACGATCAATGAAGTCAGAATTGAC  
TGCCATATGTTGCTCACTCGAGTAAATATGGACCTCAATATCATTTACTGTGAAAATAGGATTAGTGAT  
TATATGGATCTGACCCCTGTAGATATCGTAGGGAAGAGATGCTACCACTTCATCCATGCTGAAGACGTG  
GAGGGCATCAGGCACAGTCACTTGGACTTGCTGAATAAGGGTCAGTGTGTGACAAAGTACTATCGCTGG  
ATGCAGAAGAACGGAGGATATATTTGGATACAGTCCAGTGCCACCATAGCTATTAATGCCAAGAATGCA  
AATGAAAAGAATATCATCTGGGTGAATTACCTTCTTAGCAATCCTGAGTACAAGGACACACCCATGGAC  
ATCGCACAGCTCCCCATCTGCCGGAGAAAACCTCCGAATCCTCGGAGACATCCGACTCTGAGTCAGAC  
TCTAAAGACACCTCAGGTATTACAGAGGACAACGAGAACTCCAAGTCCGACGAGAAGGGGAACCAAGTCC  
GAGAACAGCGAAGACCCGGAGCCCGACCGGAAGAAGTCGGGCAACGCGTGTGACAACGACATGAACTGC  
AACGACGACGGCCACAGCTCCAGTAACCCGGACAGCCGCGACAGCGACGACAGCTTCGAGCACTCGGAC  
TTTGAGAACCCCAAGGCGGGCGAGGACGGCTTCGGTGCTCTGGGCGCGATGCAGATCAAGGTGGAGCGC  
TACGTGGAGAGCGAGTCGGACCTGCGGCTGCAGAACTGCGAGTCACTCACGTCCGACAGCGCCAAGGAC  
TCGGACAGCGCAGGCGAGGCGGGCGCGCAGGCCTCCAGCAAGCACCAGAAGCGCAAGAAAAGGCGGAAA  
CGGCAAAAGGGCGGCAGCGCCAGCCGCGCGCCTGTCCAGCGCGTTCGAGCCCAGGCGGCCTGGACGCG  
GGCCTGGTGGAGCCCCCGCGGCTGCTGTCTCCCCAACAGTGCCTCGGTGCTCAAGATCAAGACGGAG  
ATCTCAGAACCCATCAATTTGACAATGACAGCAGCATCTGGAATACCCGCCCAACCGGGAGATCTCC  
AGGAACGAGTCCCCCTACAGCATGACCAAGCCCCCAGCTCTGAGCACTTCCCGTCCCCGAGGGCGGC  
GGCGGTGGGGGTGGCGGTGGCGGGGGGCTGCACGTGGCCATTCCCGACTCGGTCTCACSCGCCCCGGC  
GCCGACGGC

SEQ ID NO:15 (MOP6 protein)

MAPTKPSFQODPSRRERLQALRKEKSRDAARSRRGKFNFEFYELAKLLPLPAITSQLDKASIIRLTIS  
YLKMRDFANQGDPPWNLRMGPPPNSTSVKGAQRRRSPSALAIEVFEAHLGSHILQSLDGFVFALNQEGK  
FLYISETVSIYLGSLQVELTGSSVFDYVHPGDHVEMAEQLGMKLPPGRLLSQGTAEDGASSASSSSQS  
ETPEPVESTSPSLTTDNTLERSFFIRMKSTLTKRGVHIKSSGYKVIHITGRLRLRVSLSHGRTVPSQI  
MGLVVVAHALPPPTINEVRIDCHMFVTRVNMDLNIICYENRISDYMDLTPVDIVGKRCYHFIHAEDVEG  
IRHSHDLLNKGQCVTKYYRWMQKNGGYIWIQSSATIAINAKNANEKNIWVNYLLSNPEYKDTMPMDIA  
QLPHLPEKTSESSETSDSESDDKDTSGITEDNENSKSDEKGNQSENSEDPEPDRKKSGNACDNDMNCND  
DGHSSNPDSRSDSDSFHSDFENPKAGEDGFGALGAMQIKVERYVESESDLRLQNCESLTSDSAkdSD  
SAGEAGAQAASSKHQKRKKRRRQKQGSASRRRLSSASSPGGLDAGLVEPPRLLSSPNASVLKIKTEIS  
EPINFNDNDSSIWNYPNREISRNEPYSMTKPPSSEHFPSPOGGGGGGGGGGGLHVAIPDSVLTPPGAD  
G

**MOP7 :**

Sequence I.D. No. 7 (Mouse mop7 cDNA sequence), total 2207 nucleotides):

```
1 agctaagtcc cggagaggac agagggcctt aggcacacaa cctaggggag aagcctggag
61 caaagcccca cagggagggc cacatggact gggaccaaga caggtcgaac accgagctgc
121 ggaaggagaa gtcgcgggac gcggcccgca gccggcgag ccaggagacg gaggtgctgt
181 accagctggc gcacactctg ccctttgcgc gcggcgtag cgcgcacctg gacaaggcct
241 ccatcatgag cctcacaatc agctacctgc gcatgcaccg cctctgcgca gcaggggagt
301 ggaaccaggt ggaaaaaggg ggagagccac tggacgcctg ctacctgaag gccctggagg
361 gtttcgtcat ggtactcacc gccgaggagg acatggctta cctgtcggaa aatgtcagca
421 agcacctggg cctcagtcag ctggagctca ttggacacag tatctttgat tttatccatc
481 cctgtgacca agaggaactt caagacgccc tgacccccag gccgaacctg tcaaagaaga
541 agctggaagc cccaacagag cgccactttt ccctgcgaat gaagagcacg ctcaccagca
601 gaggggcgac gctcaacctc aaagcggcca cctggaaggt gctgcaactg tcaggacata
661 tgagggccta caagccccct gcacagactt cccctgccgg gagccctcgc tccgagcctc
721 ccctgcaatg cctggtgctt atctgtgaag ccatcccca cccagccagt ctggagcccc
781 cgctgggccc aggggccttt ctcagtcgcc acagcctgga catgaagtgc acatactgcg
841 acgagaggat tgcagaagtt gctggctaca gtccctgatg cctgattggc tgttctgcct
901 atgaatacat ccacgctttg gactctgatg cggtcagcag gagcatccac actttgttga
961 gcaagggcca ggcagtaacg gggcagtatc gcttcctggc ccggactgga ggctatctgt
1021 ggactcagac tcaggctaca gtggtgtcag gggggcgggg cccccagtcg gaaagtatca
1081 tctgcgtcca cttcctgatc agccgtgtag aagagaccgg agtgggtgctg tctctggaac
1141 aaacggagca acatactcgc agacccccctc ggctgagtgc ctccctgcag aagggtatcc
1201 ctggcaacag tgtagactct cctgctccgc ggatcctggc cttcctgcac cctccggccc
1261 tgagtgaggc ctccctggct gctgaccctc gccgtttctg tagtccagac ctgcgccgcc
1321 tcatggcacc catcctggat ggacctcccc cagctgccac gccagcacc ccacaagcta
1381 cacggagacc ccaaagtcct cttccggctg atctcccaga taagttggca gtgggcttgg
1441 aaaatgcgca cagactctcc actgcccaga aaaacaagac cgtggagaca gatctagata
1501 tagctcagga ctctgacact ctggacttgg agatgctggc cccctacatc tccatggatg
1561 atgacttcca gctcaactcc agtgagcaat tgcccaaagt ccaccgcaga cctcccaggg
1621 tgccccgcag gccccgtgct cggagcttcc atggcctgtc gctcctatc cctgagccct
1681 ccctactgcc ccgctggggg agtgatccac gactgaactg ttccagtcct tccaggggag
1741 atgccccac agcctcctg atgcctggaa ctcggaagag ggccttggcc cagagctcag
1801 aggacaaagg gttggagctg ctggaaatta agcctcccaa gcggtcccca agactagaac
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```



1921 tgggaaacca gcaggatccc agagcccccc tcgtgcattc tcatgagccc ttgggcctag  
1981 ctccctcgct gctctctctc tgccagcatg aggaaactgt ccagcccagg aaccacttcc  
2041 cgccagcagc aggcttgggc cagacccact gagtcagcct tctcttaagc cctcttcttc  
2101 tatcccagaa aggactcagc cacactccac accagcagcc tacaccagc atggggcctc  
2161 tctcctctga gtgtgcccc cccagccag ccacagtcct acctcag

Sequence I.D. No. 16 (Mouse mop7 protein sequence), total 662 amino acids)

MDWDQDRSNT ELRKEKSRDA ARSRRSQETE VLYQLAHTLP FARGVSAHLD  
KASIMRLTIS YLRMHRLCAA GEWNQVEKGG EPLDACYLKA LEGFVMVLTA  
EGDMAYLSEN VSKHLGLSQL ELIGHSIFDF IHPCDQEELQ DALTPRPNLS  
KKKLEAPTER HFSLRMKSTL TSRGRTLNLK AATWKVLHCS GHMRAYKPPA  
QTSPAGSPRS EPPLQCLVLI CEAIPHPASL EPPLGRGAFL SRHSLDMKFT  
YCDERIAEVA GYSPDDLIGC SAYEYIHALD SDAVSRSIHT LLSKGQAVTG  
QYRFLARTGG YLWTQTQATV VSGGRGPQSE SIICVHFLIS RVEETGVVLS  
LEQTEQHTRR PPRLSASSQK GIPGNSVDSP APRILAFHP PALSEASLAA  
DPRRFCSPDL RRLMAPILDG PPPAATPSTP QATRRPQSPL PADLPDKLAV  
GLENAHRLST AQKNKTIVETD LDIAQDSDTL DLEMLAPYIS MDDDFQLNSS  
EQLPKVHRRP PRVARRPRAR SFHGLSPPIP EPSLLPRWGS DPRLNCSSPS  
RGDRPTASLM PGTRKRALAQ SSEDKGLELL EIKPPKRSPR LEPGSFLLPP  
LSLSFLLQGR QLLGNQQDPR APLVHSHEPL GLAPSLLSLC QHEETVQPRN  
HFPPAAGLGQ TH

#### MOP8:

Sequence I.D. No. 8

1 gtggctcagc cgcgcgcagg gtgcgctcgt ttgaactgcg gtgacaccga ggggtgggga  
61 ctcgaacccc cgcttcgcag ctcaggagcc tgaggtcga aagcttcggt ccagagccca  
121 gcatgaatgg atacgcggaa tttccgccca gcccagtaa cccaccaag gagcccgtag  
181 agccccagcc cagccaggtc ccactgcagg aagatgtgga catgagcagt ggctccagt  
241 gacatgagac caacgaaaac tgctccacgg ggcgggactc gcagggcagt gactgtgacg  
301 acagtgggaa ggagctgggg atgctggtag agccaccgga tgcccgccag agtccagata

361 ccttttagcct gatgatggca aaatctgaac acaaccatc tacaagtggc tgcagtagcg  
421 accagtcttc gaaagtggac acacacaaag aactgataaa aactactaaag gagctgaagg  
481 tccacctccc tgcagacaag aaggccaagg gcaaggccag tacgctggcc accttgaagt  
541 acgcccctcag gagcgtgaag caggtgaaag ccaatgaaga gtattaccag ctgctgatgt  
601 ccagcgaggg tcacccctgt ggagcagacg tgccctccta caccgtggag gagatggaga  
661 gcgttacctc tgagcacatt gtgaagaatg ccgatatgtt tgcggtggcc gtgtccctgg  
721 tgtctgggaa gatcctgtac atctctgacc aggttgcatc catatttcac tgtaaaagag  
781 atgccttcag cgatgccaag tttgtggagt tcctggcgcc tcacgatgtg ggcggttcc  
841 acagtttcac ctccccgtac aagcttcctt tgtggagcat gtgcagtgga gcagattctt  
901 ttactcaaga atgcatggag gagaaatctt tcttttgccg tgtcagtgtc cggaaaagcc  
961 acgagaatga aatccgctac cacccttcc gcatgacgcc ctacctggtc aaggtgcggg  
1021 accaacaagg tgctgagagt cagctttgct gccttctgct ggcagagaga gtgcactctg  
1081 gttatgaagc ccctagaatt cctcctgaaa agagaatttt tacaaccacc catacaccaa  
1141 attgtttgtt ccaggatgtg gatgaaagg cggtccctct cctgggctac ctacctcagg  
1201 acctgattga aaccccagtg ctcgctgcagc tccaccctag tgacaggccc ttgatgctgg  
1261 ccatccacaa aaagatcctg cagtcaggcg ggcagcctt cgactattct cccattcggg  
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1441 atgaggacgt gtttgacagc caccctgca cagaggagaa ggccctgcac ccagcattc  
1501 aggagctcac agagcagatc caccggctcc tgctgcagcc cgtccccac agcggctcca  
1561 gtggctacgg gagtctgggc agcaacgggt cccacgagca ccttatgagc cagacctcct  
1621 ccagcgacag caacggccat gaggactcac gccggaggag agccgaaatt tgtaaaaatg  
1681 gtaacaagac caaaaataga agtcattatt ctcatgaatc tggagaacaa aagaaaaaat  
1741 ccgttacaga aatgcaaact aatccccag ctgagaagaa agctgtccct gccatggaaa  
1801 aggacagcct gggggctcagc ttccccgagg agttggcctg caagaaccag cccacctgct  
1861 cctaccagca gatcagctgc ttggacagcg tcatcaggta cttggagagc tgcaatgagg  
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2101 cagagagtgt ggcgtcgctc accagccagt gcagctacag cagcaccatc gtccatgtgg  
2161 gagacaagaa gccgcagccg gagttagaga tgggtgaaga tgctgcgagt gggccagaat  
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2281 tcaagaagct gggcctcacc aaggaggtac tcgctgcaca cacacagaag gaggagcaga  
2341 gcttcctgca gaagttcaaa gaaataagaa aactcagcat tttccagtcc cactgccatt  
2401 actacttgca agaaagatcc aaggggcagc caagtgaacg aactgccccct ggactaagaa  
2461 atacttccgg aatagattca ccttggaata aaacaggaaa gaacagaaaa ttgaagtcca  
2521 agcgggtcaa acctcgagac tcatctgaga gcaccggatc tggggggccc gtgtccgccc  
2581 ggcccccgct ggtgggcttg aacgccacag cctggtcacc ctccagacag tcccagtcca

2641 gctgcccagc cgtgcccttt cccgccccag tgccagcagc ttattcactg cccgtgtttc  
2701 cagcgccagg gactgtggca gcacccccgg cacctcccca cgccagcttc acagtgcctg  
2761 ctgtgcccgt ggacctccag caccagtttg cagtccagcc cccacctttc cctgccccctt  
2821 tggcgccctgt catggcattc atgctaccca gttattcctt cccctcgggg accccaaacc  
2881 tgccccaggc cttcttcccc agccagcctc agtttccgag ccacccaca ctcacatccg  
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3001 gtgcttgctc agccaccgg gccaccccac catcggccat gggtagggcc tccccaccgc  
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3361 gctcactggg ctgcgacgcc tccccgagt gggcaggcag tagtgacaca agtcatacca  
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3481 gtatggaaga aagtgagcat ttcattaagt gcgtcctgca ggatcccatc tggctgctga  
3541 tggcagatgc ggacagcagc gtcatgatga cgtaccagct gccttcccga aatttagaag  
3601 cggttttgaa ggaggacaga gagaagctga agctcctaca gaaactccag ccaggttcac  
3661 ggagagtcag aagcaggagc tgcgcgaggt ccaccagtgg atgcagacgg gcggcctgcc  
3721 cgcagccatc gacgtggcag aatgtgttta ctgtgaaaac aaggaaaaag gtaatatttg  
3781 cataccatat gaggaagata ttccttctct gggactcagc gaagtgtcgg acaccaaaga  
3841 agacgaaaat ggatccccct tgaatcacag gatcgaagag cagacgtaac ccctgcccc  
3901 cctcagcccg gcagccagcg aggtacacca ggtggtgctt ggaagagatg aaagatcttc  
3961 atggctgttt cactgaaat ggacacatat gctcatgttg ctttttttgt tttagaaaaa  
4021 aaaacaacat agttttctga aggggcgact taaaactgtg gagagtgggg agagttcgga  
4081 aagaaatatg tttttatata taaaatatat atgtggagtt ttgtgggatg gggaagagat  
4141 tttagttggt atttaacttg agaaagacta agcgcctctt agtgtcaggg aagttgcctc  
4201 agtgcctcca gaagtcctgt gactgtgacg agacctctgt ctgctgcacc agctggggac  
4261 tctggcttcc agagctttcc cagggtgttt ggatcagatc aaattttgtc ctctcttggt  
4321 gactgctttt tatctgaatt atcatttagt caaggtagag tgttttttta tacataccaa  
4381 atggagatag cagcctctcc tagttttatt tcaaaacgtt tcacattaaa tgggtgtgaag  
4441 cgttggttg gcaaccaaca gctttggctt ctggtgtggt caatatttca gtctgacata  
4501 ggttttggtt gtagtgaaca aagttgaaac atttgctctg gactaaagaa gcctagtggg  
4561 ttgtgtggcc aactccatcg gatgaatgca cacgcagaca gacctctgt atatttctgc  
4621 attattcttg tctccttttc agaccatgat ggccaatatg gagattaaaa tatgtcatca  
4681 gtcactctct tatgggtgact tccctttgca aaccaggctg tgaccaaacac atgtgagacc  
4741 cagtcctgtt tggttttctt ccgttggaac caccagaca tctgcttcca cccagccaag  
4801 cccacatcac atctcctggc cgagagcagc cactgccact cagtctgaca gcttgcgact  
4861 gcactctgtat tttcaggggt gcagtgaact cacctctccc actgcacctt ggggtgggtg

4921 cacagccctc attcttttca tgagcccgac ctctctcgga gcagcttcag gcctctgcc  
4981 gtgtcccccag cacttttagg tcatttgac acttggggaa aagtgaggcc agtctgccc  
5041 gcttttttaca aaacctcatg ttgcattgta tattccaaag atgggttcaga aaatttaata  
5101 ttggtccctg gtggaaattc aaagttatca ctgaagaaca gttgacttaa aattggacca  
5161 agactatgag gcttaaaagg gaccagggtt ttcttttttt tttttttttt tttttttttt  
5221 agatggagtt tctttttgcc caggctggag tgcagtggcg ccactctggc tcaactgcaac  
5281 ctctgcctcc caggttcaag cgattctcct gcctcagcct cctgagtagc tgggaccaca  
5341 ggcgactgcc accacacca gctaattttt tgtattttta gtagagacag ggtttcacca  
5401 tgttggccag gctggtctcg aactcctgac ctcaagcgat ccaccacct cggcctccca  
5461 aagtgtctggg attacaggcg tgagccacca cgcccaactg ggaccagggt tttctgtttt  
5521 ttgatggagg tgaaatctct ttgtaatcca ctaggttttc atcgtaaaac catcttatgc  
5581 ctgactatta aacctattct tcataaacac aagaacactt taatttttcg ttaatttaca  
5641 aagtaacatc agctgcctat gcctatgata aggtagcagt ctgcattctt atggccatta  
5701 gatgttataa actccttgcc tctaaagtca gatcatgaag ggataggtgt tcatctaagg  
5761 ttacagttat gttaccgaaa cacaaaactg ccaaaatctt actctgctgt tatgaatgtt  
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5881 cgcgtgccaa gcagttgact taataggatc atcttgtgaa tttgtttacg tgatgccaa  
5941 catcaagtca tgttttcttt agtgtgtgtg cttacacagg tgttaaacag tttttctcta  
6001 ttttaaactg agccttcttt ttaatatatt cccgaagaga tatgtaaata agctctcaga  
6061 gtttctgtga tgatttggtg agccttgctg gacaagtggg ttgtttgtgt gcaaaccaaa  
6121 ctttctttac ccagtgcaat agatttggtt gactgcttgt gtctttttat gacctgtttg  
6181 ccttttagaa aattggtaaa taaagcaagt atattttt

Sequence I.D. No. 17

MNGYAEFPPSPSNPTKEPVEPQPSQVPLQEDVDMSSGSSGHETN  
ENCSTGRDSQGSDDSGKELGMLVEPPDARQSPDTFSLMMAKSEHNPSTSGCSDQS  
SKVDTHKELIKTLKELKVHLPADKKAKGKASTLATLKYALRSVKQVKANEYYQLMS  
SEGHPCGADVPSYTVSEMESVTSEHIVKNADMFAVAVSLVSGKILYISDQVASIFHCK  
RDAFSDAKFVEFLAPHDVGVFHSFTSPYKLPWSMCSGADSFTQECMEEKSFRCRVSV  
RKSHENEIRYHPFRMTPYLVKVRDQQAESQLCCLLLAERVHSGYEAPRIPPEKRIFT  
THTPNCLFQDVERAVPLLGYLPQDLIETPVLVQLHPSDRPLMLAIHKKILQSGGQP  
FDYSPIRFRARNGEYITLDTSWSSFIPNWSRKISFIIGRHKVRVGPLNEDVFAAHPCT  
EEKALHPSIQELTEQIHRLLLQPVPHSGSSGYGSLGNGSHEHLMSQTSSSDSNGHED  
SRRRRAEICKNGNKTKNRSHYSHEGQKKKSVTEMQTNPPAEKKAVPAMEKDSLGSV  
FPEELACKNQPTCSYQQISCLDSVIRYLESCNEAATLKRKCEFPANVPALRSSDKRKA  
TVSPGPHAGEAEPPSRVNSRTGVGTHLTSLALPGKAESVASLTSQCSYSSTIVHVGDK

KPQPELEMVEDAASGPESLDCLAGPALACGLSQEKEPFKKLGLTKEVLAAHTQKEEQS  
FLQKFKEIRKLSIFQSHCHYYLQERSKGQPSERTAPGLRNTSGIDSPWKKTGKNRKLK  
SKRVKPRDSSESTGSGGPVSARPPVLVGLNATAWSPSDTSQSSCPAVFPAPVPAAYSL  
PVFPAPGTVAAAPPAPPHASFTVPAVPVDLQHQFAVQPPFPAPLAPVMAFMLPSYSFP  
SGTPNLPQAFFPSQPQFPSHPTLTSEMASASQPEFPSRTSIPRQPCACPATRATPPSA  
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QPKAPLTRDEPSDTQNSDALSTSSGLLNLLNEDLCSASGSAASESLGSGSLGCDASP  
SGAGSSDTSHTSKYFGSIDSSENNHHAKMNTGMEESEHFICKVLQDPIWLLMADADSS  
VMTTYQLPSRNLEAVLKEDREKLKLLQKLQPGSRRVRSRSCARSTSGCRRACQPQST  
WQNVFTVKTRKKVIFAYHMRKIFLLWDSAKCRTPKKTKMDPP

**MOP9 :**

SEQ ID NO: 9 (MOP9 cDNA)

CCGGGCAGGTCTCCTGTGGTTTCCAGCCGCGTGAGTCCAGGGACAAGACCAACAGCTATGGGGTCTTTCAGCT  
CACACATGACAGAGTTTCCACGAAAACGCAAAGGAAGTGATTGAGACCCATCCCAGTCAGGAATCATGACAGA  
AAAAGTGGTGAAAAGCTTTCTCAGAATCCCCTTACCTATCTTCTTCAACAAGGATAGAAATATCAGCCTCC  
AGTGGCAGCAGAGAAGCTCATAGCCAAACTGAAAAGCGGAGGAGAGATAAAATGAATAACCTGATTGAAGAAC  
TGTCTGCAATGATCCCTCAGTGCAACCCCATGGCGCGTAACTGGACAACTTACAGTTTTAAGAATGGCTGT  
TCAACACTTGAGATCTTTAAAGGCTTGACAAATCTTATGTGGGAAGTAATTATAGACCATCATTTCTTCAG  
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GAACTTTTGGGAACCTTCTTGTTATGAATATTTTCATCAAGATGACCACAATAATTTGACTGACAAGCACAAAG  
CAGTTCTACAGAGTAAGGAGAAAATACTTACAGATTCCTACAAATTCAGAGCAAAAGATGGCTCTTTTGTAAC  
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CTAGACAGTCCTGTATGAGTGACCTGGAATGTCTACTGGAACAGTACTTGGTGCTGGTAGTATTGGAACAGA  
TATTGCAAATGAAATCTGGATTTACAGAGGTTACAGTCTTCTTCATACCTTGATGATTCGAGTCCAACAGGT  
TTAATGAAAGATACTCATACTGTAACTGCAGGAGTATGTCAAATAAGGAGTTGTTTCCACCAAGTCCTTCTG  
AAATGGGGGAGCTAGAGGCTACCAGGCAAAACCAGAGTACTGTTGCTGTCCACAGCCATGAGCCACTCCTCAG

TGATGGTGCACAGTTGGATTTTCGATGCCCTATGTGACAATGATGACACAGCCATGGCTGCATTTATGAATTAC  
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SEQ ID NO:18 (MOP9 protein)

MGSFSSHMTEFPRKRKGSDDPSQSGIMTEKVVEKLSQNPLTYLLSTRIEISASSGSREAHSQTEKRRRDKMN  
NLIEELSAMIPQCNPMARKLTKLTVLRMAVQHLRSLKGLTNSYVGSNYRPSFLQDNELRHLILKTAEGFLFVV  
GCERKILFVSKSVSKILNYDQASLTGQSLFDLHPKDVAKVKEQLSSFDISPKEKLIDTKTGLQVHSLHAG  
RTRVYFGSRRSFFCRIKSKISVKEEHGCLPNSKKKEHRKFYTIHCTGYLRSWPPNIVGMEEERNSSKKDNSNF  
TCLVAIGRLQPYIVPQNSGEINVKPTEFITRFAVNGKFVYVDQRATAILGYLPQELLGTSCYEYFHQDDHNNL  
TDKHKAVLQSKEKILTDSYKFRAKDGSFVTLKSQWFSFTNPWTKELEYIVSVNTLVLGHSEPGEASFLPCSSQ  
SSEESSRQSCMSVPGMSTGTVLGAGSIGTDIANEILDQLRLQSSSYLDDSSPTGLMKDTHTVNCRSMSNKELF  
PPSPSEMGELEATRQNSTVAVHSHEPLLSDGAQLDFDALCDNDDTAMAAFMNYLEAEGGLGDPGDFSDIQWT  
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